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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/616,229 | 07/09/2003 | Louis Hebert | 0216-012 | 2251 |

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| EXAMINER | |
|---|---|
| BASINGER, SHERMAN D | |
| **ART UNIT** | **PAPER NUMBER** |
| 3617 | |

DATE MAILED: 04/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/616,229 | HEBERT ET AL | |
| | Examiner | Art Unit | |
| | Sherman D. Basinger | 3617 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,10-21,23,24,26,28,31,36,38 and 39* is/are rejected.

7)☒ Claim(s) *5-9,22,25,27,29,30,32-35 and 37* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 July 2003* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *9/29/03&9/27/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: *ids 10/29/04*

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 1-4, 12, 24, 28 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grieshaber in view of Ball.

Grieshaber discloses a simulator for performing underwater submarine escape training in a body

of water (see column 1, lines 1-5), the simulator comprising

a submersible structure in figure 1 comprising

a bell 47 defining a main chamber; and

an escape tower 50 provided over the bell and defining an escape

chamber communicating with the main chamber, the escape tower

having an upper hatch 51 separating the escape chamber from

outside the submersible structure; and

means 28 for vertically moving the submersible structure relative to the water

surface of the body of water.

Grieshaber does not disclose a lower hatch between the main chamber and the escape Chamber. Note the lower hatch 28 of Ball. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject

matter pertains to provide the escape chamber 50 of Grieshaber with a lower hatch similar to that of Ball. Motivation to do so can be found in column 2, line 61 of Ball.

Grieshaber also discloses a method of performing undewater submarine escape training in a body of
water, the method comprising:
A) providing a submersible structure (figure 1) comprising: a bell 47 defining a main chamber; and
an escape tower 50 provided over the bell and defining an escape
chamber communicating with the main chamber, the escape tower
having an upper hatch 51 separating the escape chamber from
outside the submersible structure;
B) allowing at least one trainee and at least one instructor to be positioned
inside the main chamber (column 3, .lines 82 and 83);
C) completely submerging the submersible structure at a given depth in the
body of water (column 3, lines 84-86); and
D) allowing the trainee to enter the escape tower and leave the
submersible structure through the upper hatch (column 4, lines 1-3).

Grieshaber does not disclose a lower hatch between the main chamber and the escape Chamber. Note the lower hatch 28 of Ball. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject

matter pertains to provide the escape chamber 50 of Grieshaber with a lower hatch similar to that of Ball. Motivation to do so can be found in column 2, line 61 of Ball.

In Grieshaber the base under the bell is 83; the ballasts of the base is 94; the removable fasteners of claim 4 are the rivets shown in figure 1 attaching the base 83 to the bell 47; the bottom emergency exit hatch is 71; the body of water shown in Grieshaber is considered to be a pool of water; and with regard to claim 36, the submersible structure of Grieshaber has a positive buoyancy and is submerged by pulling it down with cable 28.

3. Claims 10, 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grieshaber and Ball as applied to claim 1 above, and further in view of Talkington. Grieshaber does not disclose at least one inflatable float connected outside the submersible structure, the inflatable float being provided to control buoyancy of the structure. Note the submersible structure 20 of Talkington with inflatable float 24. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to provide to the submersible structure of Grieshaber an inflatable float similar to 24 of Talkington to help control its buoyancy. Motivation to do so is to assist movement of the bell of Grieshaber toward the surface after personnel from the downed submarine have been loaded into the bell.

By providing Grieshaber with the inflatable float the buoyancy of the submersible structure can be adjusted by selectively inflating and deflating the float, and the float can be an emergency float for bringing the submersible structure at the surface of the body of water.

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grieshaber and Ball as applied to claim 1 above, and further in view of Viveiros. Grieshaber does not disclose a side maintenance hatch between the main chamber and the outside of the submersible structure. Note the side maintenance hatch 11 of Viveiros. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to provide the bell 47 of Grieshaber with a side maintenance hatch similar to 11 of Viveiros. Motivation to do so is to allow the bell of Grieshaber to rescue submarine personnel in a manner similar to that taught by Viveiros.

5. Claims 13-18, 20, 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grieshaber and Ball as applied to claim 1 above, and further in view of Banjavich 312.
Grieshaber does not disclose a remote supply unit,
the remote supply unit being connected to the submersible structure by an umbilical cable; wherein the umbilical cable at least

comprises a breathing air link and an electrical power link; wherein the umbilical cable further

comprises a telecommunications link; wherein the remote supply unit is

controlled from a control panel located outside the body of water; and further comprising a traveling crane

located above the body of water.

Banjavich 312 discloses a remote supply unit,

the remote supply unit being connected to the submersible structure by an

umbilical cable 19; wherein the umbilical cable at least

comprises a breathing air link and an electrical power link (column 5, lines 48-64); wherein the umbilical cable further

comprises a telecommunications link (column 5, lines 48-64); wherein the remote supply unit is (inherently)

controlled from a control panel located outside the body of water; and further comprising a traveling crane 150

located above the body of water (the crane travels with the barge).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains in view of the teachings of Banjavich 312 to provide to the submersible structure of Grieshaber a remote supply unit,

the remote supply unit being connected to the submersible structure by an

umbilical cable; wherein the umbilical cable at least

comprises a breathing air link and an electrical power link; wherein the umbilical cable further

comprises a telecommunications link; wherein the remote supply unit is

controlled from a control panel located outside the body of water; and further comprising a traveling crane

located above the body of water. Motivation to do so is to provide air to the bell 47 of Grieshaber, communications for personnel in the bell from an area on a barge handling the bell, and a crane traveling on the barge to handle the submersible structure.
With regard to claims 20 and 21, the pulley is 79 of Grieshaber which in figure 1 is close to the bottom location such that the bottom location comprises at least one pulley 79 anchored by the cable to the fixed location. The dead weight of claim 21 is the submarine.

6. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grieshaber, Ball and Banjavich 312 as applied to claim 13 above, and further in view of Van Lunteren.

Grieshaber does not disclose that the winch shown in figure 3 comprises a hydraulic motor, the motor being powered through hydraulic pressure lines included in the umbilical cable. Van Lunteren discloses hydraulic motors coupled to winches. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to couple the winch of Grieshaber to a

hydraulic motor as taught by Van Lunteren. Motivation to do so is to power the winch other than by the hand wheel 70.

To provide hydraulic pressure lines for the winch through the umbilical cable provided to Grieshaber in view of 19 of Banjavich 312 would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains as such cables are already used to provide air and communications to the submersible structure of Grieshaber.

7. Claim 26 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grieshaber and Ball as applied to claim 1 above, and further in view of Banjavich et al. Grieshaber does not disclose that the bell comprises emergency breathing system to which are connected a plurality of individual BIBS located in the main chamber. Note in Banjavich et al the emergency breathing system to which are connected a plurality of individual breathing masks 35. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains in view of breathing masks 35 of Banjavich et al to provide to Grieshaber an emergency breathing system to which are connected a plurality of individual BIBS located in the main chamber. Motivation to do so is to provide a supply of breathing air for personnel in the main chamber of Grieshaber encase the air in the chamber begins to lack sufficient oxygen, or in case the bell starts to leak water.

Grieshaber also does not disclose providing a diver around the submersible structure in the body of water to assist the trainee. Note the diver of Banjavich et al. It would have

been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to provide a diver similar to that of Banjavich et al to the submersible structure to assist any trainee in the bell 47. Motivation to do so is to aid the rescue of personnel from the submarine.

### *Allowable Subject Matter*

8. Claims 5-9, 22, 25, 27, 29, 30, 32-35 and 37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### *Claim Objections*

9. Claim 32 is objected to because of the following informalities: in line 4 should "aboard" be –abort-? Appropriate correction is required.

### *Conclusion*

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Le Masson is cited to show the chamber 2 with what can be considered as trainees being assisted by a diver 4.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sherman D. Basinger whose telephone number is 571-272-6679. The examiner can normally be reached on Monday through Friday, 5:30 a.m. to 2:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samuel J. Morano can be reached on 571-272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sherman D. Basinger
Primary Examiner
Art Unit 3617

4/27/06

4/27/06